Newsletter

April 1993

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CUGI

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April 1993

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Editorial

Well, doesn't time fly. It seems like only four months ago that I was writing the last editorial (oops :-) Since then, I've been fairly busy—travelling to Florida for the 1993 Orlando Developers Conference, coming up to speed on a new operating system (OS/2) at work, and just recently, helping to prepare CUGI's 10th Anniversary Quiz (my first quiz from the other side of the table, in fact).

Lots of interesting items in this newsletter, and once again, it's nice to see some new names on the contents page. Geoff has been reminiscing about his time in CUGI over the past ten years, while Rocco reports on a most enjoyable trip the three of us made to an ICPUG function in Charmouth recently. There are also articles covering such diverse topics as neural networks, computer construction, and a who's who of the Amiga world. Kieran Tully has produced a very useful guide to making your A1200 more compatible with older software, and this issue sees the introduction of what will be a regular feature from Magnus listing all the books and hardware currently available for borrowing from the club library.

First though, the news which most of you will have heard by now—Telecom Eireann have announced a major overhaul of the current telephone charges. In brief, peak rate local calls are four times as expensive, off-peak calls are twice as expensive, and trunk and international calls will be reduced by 25–40%. While this may be good news for export companies, it's something of a disaster for most BBS callers! I predict that one result of the new charges (which will be introduced this September) will be that the use of offline reader (OLR) utilities will increase dramatically. OLRs allow you to logon, upload any new messages you've sent since last call, download all new messages, and logoff again; you can then read the new messages at your leisure. This allows the average call duration to be on the order of 3–4 minutes, and can help considerably in keeping costs down.

Since the last newsletter, I've joined the commercial UK service Cix, which has a lot to offer the Amiga and PC user. Although Cix is based in the UK, I can do a full *blink* (calling in to upload and download messages) in about 50 seconds, or an 'upload replies only' blink in under 30 seconds—this works out very economically, especially if you call at economy rate (12 am–8 am). Under the new charging system, economy rate will disappear, but off-peak calls to the UK will be charged at a similar rate (about 25p/min). When using a long-distance service like Cix, it really pays off to have a high-speed modem—while downloading text files, I've achieved speeds of over 3300 cps using V32bis/V42bis.

New Amigas Products

Commodore made the not-unexpected move of introducing a 68030-based model of the Amiga 4000 in March. Contrary to what some people might have wished, it comes supplied with a 68EC030 chip fitted (like a 68030, but with no MMU) and there is a separate socket for an FPU. This is undoubtedly intended to make sure the retail price scrapes in underneath the magic £1000 barrier (including VAT). Compared to earlier Amiga packages, this is quite a good deal—you get the AGA chipset, 4 megs of RAM, and an 80 MB hard drive. Compared to the PC world however, it still looks a little overpriced. While it's all very well to argue that this is not comparing like with like, the average new computer buyer in the street won't realise this and is quite likely to be swayed by talk of '486', 'SVGA', '50 MHz' and so on. It doesn't help that much of the new games software these days seems to be released on the PC first.

For all that, the A4000/030 looks like the ideal system for the Amiga user who needs a bit more speed and expandibility than that provided by the A1200, and it will undoubtedly prove to be a big seller for Commodore.

Other new products have also been announced by Commodore, though they are not yet shipping. The A4000-T has been previewed at CeBit in Germany and at the World of Commodore show in New York, and is essentially an A4000/040 in a tower case, with SCSI-II on the motherboard (as *well* as IDE) and *two* display slots, allowing both a genlock and display enhancer to be installed, for example.

Why might you want to plug in a display enhancer? Well, another announcement made was that there will be an AGA version of the display enhancer which can support all 16 million colours. It will also be able to promote *any* screen mode to be flicker-free, including the new interlaced 800×600 AGA modes and also even higher resolution modes like 1024×768 which are currently possible but impractical due to extremely low refresh rates. With the AGA display enhancer, all such modes can be displayed at a refresh rate of 72 Hz, giving a very sharp display. In addition, there will also be facilities for adding additional video RAM to allow a full true-colour 24 bit display which can be overlaid on top of any of the existing Amiga screen modes (just like an external genlock source). This sounds like it will be a really useful add-on, but it probably won't be cheap. Release is scheduled for this Autumn.

Commodore have also been showing their prototype MPEG board at various shows. This board can take an MPEG video file from a hard drive or CD-ROM and display it full screen at 30 frames per second, giving VHS quality. One demo I saw was of a 5 minute Bon Jovi video, running inside a Workbench window, and the quality was excellent. On disk, the video occupied 50 MB—this may sound like a lot, but when you realise that the original uncompressed video needed 2.5 GB, you can see that there is some serious compression at work here! Watch this space.

Orlando or Bust

As I mentioned earlier, I paid a visit to Florida recently, to attend the 1993 Amiga Developers Conference in Orlando. This was the first time that a combined US/European conference had been held, and it was very successful. About 400 developers from all over the world turned up, including about 12 developers from the UK, plus one from Ireland (yours truly). The conference ran for five days, but I decided to go for two weeks so that I could take a holiday at the same time.

The CBM non-disclosure agreement prevents me discussing much of what I saw, but one item not covered was the NewTek 'Fuzzy Mutant Toasters from Outer Space' party, held on the first evening of the conference. This was basically an opportunity for NewTek to show off a bit—they displayed a very amusing video showing life at NewTek, along with some of the new Video Toaster features, and followed that with an entertaining talk on where NewTek was going in the future and their commitment to the Amiga. They also mentioned that everyone in NewTek has an Amiga 4000 on their desk, a fact confirmed last month when Newtek announced their new version of the Toaster designed specifically for use with AGA and the Amiga 4000.

As well as all the usual sessions revealing what Commodore has in store for the future of the Amiga (about which, all I can say is that good times are ahead!), there was also a demo room set up for developers to show off their latest tricks. I spotted lots of interesting things in here, including the new *Picasso* graphics board which can run Workbench at a resolution of 1280×1024, and is very nippy. I also caught a glance of *Deluxe Music Construction Set II* which has been completely rewritten from scratch to take advantage of Workbench 2.0, and looks very nice indeed.

There really isn't enough space or time here to go into a full description of the conference, other than to say that I really enjoyed myself; staying on for a second week (in the company of several of the UK developers, including John & Janet Bickerstaff from ICPUG) also gave me the chance to see a rocket launch at the Kennedy Space Centre, which was quite a sight. And of course, you can never get bored in Orlando, with Disney World, the Epcott Centre, Universal Studios, and all the other tourist attractions. With any luck, I'll be able to repeat the experience next year.

E.C.

Workbench 2.0 Hints & Tips

by Matt Brookes

Moving up to a newer version of an operating system often means gaining lots of new features, without realizing you've got them! AmigaDOS and Workbench, because of their inherent flexibility, will often let the clever user invent a workaround for missing features, and whilst a new feature may circumvent the need for the workaround, the force of habit will take over, and the new feature may be missed! Another cloaking device used by these gems is to have their description so deeply buried in the manual (assuming you even got one!) that no user will ever find them, not wanting to read the entire manual *again*!

In this article, I'll show you some of the tricks I've discovered whilst using Workbench 2.0. Some of these may also work for Workbench 1.3 (for which I never *did* get round to reading the manual), and all should work for Workbench 3.0. No doubt there are many more, especially in Workbench 3.0, so perhaps you'd like to write about the hidden features you've found in the next CUGI magazine.

The first few tricks all concern the right mouse button (RMB) and its use on the Workbench—the RMB cancels LMB 'click and drag' operations! Start the Workbench, and open a window. Now grab the window by its titlebar and drag it across the screen. At this point, you're holding an outline representation of the window, and the real window hasn't yet moved. If you let go of the LMB, you would expect the outline to disappear, and the real window to snap into its place. Instead, whilst still holding the LMB, click the RMB—the outline will disappear, and the window will not have moved. This also works for window resizing operations.

A word of warning though: Early versions of *Yak*, a multi-purpose commodity, use this button combination for screen-cycling. The machine will freeze if you try to screen-cycle with *Yak* whilst holding a window by its title bar, as I discovered to my expense whilst writing this article! V1.4a of *Yak* fixes this problem.

The same mouse button combination also works for icons, and this is where it starts to get really useful. Let's say you wanted to select all the icons in a drawer, except one. You could painstakingly select all the icons one by one, or you could drag a 'marquee' around groups of icons, avoiding the unwanted one; slow business!

Instead, you can select all the icons in a window, either from the *Window → Select Contents* menu, or with a marquee. Now, whilst holding the shift key, select and hold the unwanted icon with the LMB, and then press the RMB; it will be unselected! Do this for as many icons as are unwanted, then perform whatever operation is desired on the rest, moving or deleting them for example. Finally, if you choose to select icons one by one, but accidentally select the wrong one, you no longer have to start from scratch; simply unselect the unwanted icon using the RMB.

Next to come under scrutiny is the window close gadget. Under Workbench 1.3, after opening a drawer, you have to wait for all the icons to load from disk; fine, unless you've opened the wrong drawer by mistake, which is particularly painful for floppy operations! Under Workbench 2.0 and above, clicking the window close gadget will abort the process of loading icons, and will close the window again. The same is true for the *Window → Show → All Files* operation: clicking the close gadget whilst Workbench is creating icons for iconless files will cause it to abort the operation, and revert to showing only icons. The window doesn't close. (Very useful if you didn't really want to show all files in a drawer with hundreds of iconless files!)

A quick tip for those who like their Workbench windows and icons to be arranged to perfection: holding the shift key whilst using the scroll arrows will cause the icons in a window to scroll in single pixel increments rather than big jumps.

Finally, to move the contents of a floppy disk into a sub-directory of your hard drive (or another floppy, or RAM disk, assuming it will fit), simply open the window in which you want the sub-directory to be created, and drag the disk icon over it. A subdirectory with icon will be created, and the entire contents of the disk will be copied into it.

I hope you've found something of use here (if not, why not!) Next time, we'll take a look at some of the less obvious features of the AmigaDOS Shell, though I have to confess that between *SID* and *ToolsDaemon*, I'm not much of a Shell user. If you have any shell tips, I'll be happy to include them!

CUGI Library

by Magnus Byne

The CUGI library has a large selection of Amiga books, including a range of Abacus books covering most aspects of the Amiga, and Commodore's Rom Kernel Manuals (essential if you are doing programming). In addition, there are reference books for the C64 and C128, along with general programming and computer books.

You can borrow books from the CUGI library at any meeting, free of charge. You must return them by the following meeting, but if nobody else wishes to borrow them, you can renew them for another two weeks.

Here's a list of what's currently available (new titles may have been added by the time you read this):

Abacus

AmigaDos Inside and Out
Amiga for Beginners
Amiga Tricks and Tips
Amiga Disk Drives Inside and Out
Amiga Internals
Desktop Video Guide

Commodore Reference Manuals

Amiga ROM Kernel, Libraries 2.0
Amiga ROM Kernel, Devices 2.0
Amiga ROM Kernel, Includes and Autodocs 2.0
Amiga ROM Kernel, Style Guide

Amiga ROM Kernel, Libaries and devices 1.3
Amiga ROM Kernel, Includes and AutoDocs 1.3
Amiga ROM Kernel, Hardware Refernce Mannual 1.3

Using the System Software 2.0
AmigaDos Manual 3rd Edition

The C Language

C Quick Reference
New C Primer Plus
The C Programming Language (K&R)
The C Library
Programming in C

General

Amiga Applications
Beginners Guide to the Amiga
Amiga Format Book
The Amiga System
AmigaDos
The Anatomy of the A590

Graphics

Amiga Artist
Inside Amiga Graphics
Using Deluxe Paint (V2)

Programming

Mapping the Amiga
Amiga Programmers Handbook
68000 Pocket Book
MC68881/2 Motorola Data Book
Microcomputer Puzzles

Golden Oldies

C64 Programmers Reference Guide
C128 Programmers Reference Guide
Advanced C64 Machine Code
The Anatomy of the C64
The Anatomy of the 1541

Hardware

The CUGI library also has the following hardware available for loan:

- Audio Sampler
- Video Backup System
- Modem (2400 baud)
- Video Digitizer
- Handheld Scanner

You need to be a member of the club for at least six months before you are entitled to borrow any hardware items. For the Audio Sampler and Video Backup System, there is a rental charge of £2 and a £3 deposit. For the other items, there is a rental charge of £3 and a £7 deposit.

For more information contact me at any club meeting.

Amiga 1200 Compatibility

by Kieran Tully

Introduction

For Christmas, I received an all-singing, all-dancing A1200. It eventually arrived on the morning of Christmas Eve, from everyone's favourite 'courier' company, accompanied by the usual misinformation. After paying the VAT (yes, I was one of the unlucky ones) I eagerly ripped open the box and prepared to meet Workbench 3.0 and lovely AGA graphics.

All was rosy as I dutifully backed up my newly acquired Workbench disks, when I had the sudden urge to play a game. The two months without my trusty A500 had left me with ever worsening joystick withdrawal symptoms, so I decided to load *Lemmings*. I inserted the disk, the drive light went on, and... horror of horrors—I was greeted by the V3.0 'Software Failure'. Alright, no need to panic. I tried another, and—you've guessed it—that game also failed! And so began my (fruitful) search for compatibility...

Here follow some tips that I have found to be of great value in getting older games and programs to work properly on the newer, more modern machines.

Boot Menu

The boot menu, available on Kickstart 2.x machines and above, is always a good place to start when trying to get software, especially games, to start working. Disabling the credit card slot (CC0:) and any external drives, and so freeing up valuable memory, will often cause games to miraculously begin operating correctly.

On Kickstart 3.x machines, there is also a *Display Options* item. This allows you to revert to ECS, or even the original (pre-A500+) registers, so that software that 'hit's the hardware' directly can remain compatible with the AGA chipset.

Also on Kickstart 3.x machines, there is an option to disable CPU caches, present on 68020 processors and above, to get some programs working that make incorrect assumptions about where data is coming from.

Kickstart Downgrade

A500+ and A600 owners also have the option of purchasing Kickstart 1.3 (which I happen to have for sale, owing to the physical impossibilities of installing it in an A1200, if anyone is interested in buying it...) and a ROM Switcher, which are easily obtainable from CUGI's stores. This will help quite a bit to increase compatibility with many older titles.

Kickstarts are also available as disk files which can be loaded into RAM and made reset-proof, similar to the way the old A1000 loaded Kickstart disks, and the way that CUGI BBS used to run Kickstart 2.04. However, these files are only supposed to be available to registered developers, and although Kickstart V1.3 was distributed on a certain magazine's coverdisk, and can be obtained from some PD libraries, the legality of this remains questionable.

Software

There are also many software solutions in the public domain which help to make your machine more compatible. By far the best of these, in my opinion, is *Degrader* by Chris Hames (of *DirWork* and *PC-Task* fame). This remarkable piece of software installs a reset proof 'handler' (for want of a better word) that will switch off any external disk drives that you happen to have attached, switch off the processor cache, burst mode and fast memory (if any of these are present) and much more besides.

One important thing which it does extremely well is to block privileged instructions, such as the MOVE SR instruction that many programmers once used (although it was warned against on the very first pages of the RKM manuals). These instructions are illegal or work differently on members of the 680x0 series other than the base 68000. I have seen similiar programs that attempt to do this, but none that cause as many delinquent programs to start working as this one. At only around 3600 bytes crunched.

it is a must for anyone's system disk. This great program is readily obtainable from me, on Fish 562, or from most public domain libraries.

Unfortunately, holding down a mouse button during reset to access the Boot Menu has the unfortunate side effect of removing *Degrader*, since it uses the same mouse button to force an exit. This means that it is currently impossible to have original chip set registers and prevent privilege errors at the same time. This is rather frustrating, as I suspect many more programs would work if this was possible. [*Degrader 1.30 fixes this problem, and also adds some AGA-specific support. Also, A4000 owners may find that running a utility called ChangeVBR which moves the interrupt vectors back to low memory will help make more software compatible with Workbench—Ed*]

Corrupted Graphics

Sometimes a game will load fine, but its graphics screens will be corrupted. If the disk has an editable startup-sequence (i.e. opens an AmigaDOS window at bootup time) then there is a way around this problem that works with a surprising number of games. Placing a program I have called *ChipOnly* (which I assume is public domain—it was in the C directory of some PD disk) in the Startup-Sequence rectifies this problem. Quite how it does it I don't know, but it does appear to halve the free memory map in some cases, even if you have no fast memory installed, which makes its name seem quite confusing. Perhaps its ability to cure graphical problems is the biproduct of a not so good cleanup routine.

Virii

Believe it or not, virii are a common cause of programs not working on *any* machine. Apart from the ones that deliberately corrupt disks (Saddam) or prevent programs from loading (Byte Bandit), some virii are actually incompatible with Kickstart 2. Instead of going about their destructive work, they can crash the machine, or just lock it from all input. So, as has been said many times before, use a decent and up-to-date virus killer, such as *VirusZ* or *VirusChecker*, available from CUGI. You have been warned!

AmigaDOS Changes

Kickstart 2.x introduced some major changes in AmigaDOS, and some of these can cause programs to fail. Although a ROM Switcher will cure these problems, for those without this luxury (such as myself—see earlier), here are some tips.

Firstly, be aware that AmigaDOS now looks at and acts upon file 'protection bits'. This means that if a file is protected against reading, or does not have the executable bit set, then some loaders will refuse to work under

Kickstart 2.x. This is easily changed using the **Protect** command, and is a common problem with public domain compilation disks.

Another change that can cause problems is the fact that commands such as `Resident` and `Run` are now internally resident in ROM. Startup-sequences that do not clearly specify the path of files they wish to load may no longer work, due to AmigaDOS mistakenly loading commands from ROM instead of totally different ones on disk. To get around this, just change the Startup-sequence or appropriate batch file to use the full path name to access the command in question (e.g. `DF0:C/TYPE`).

Example

I am going to finish with an example, using some of the techniques mentioned above, to show you how to get *Barbarian II* from Palace Software working. First, we'll look at the startup-sequence:

```
George
run
```

Simple, right? But who spotted that line 2 will not work properly on Kickstart 2.x and above machines, due to the fact that there is an internal command called `Run` resident in the ROM that will be loaded instead of `Run` on the *Barbarian II* disk? A simple change:

```
George
SYS:run   ; Must give full path or Run in ROM will be used
```

and Barbarian II loads. Unfortunately, however, the graphics are corrupted. After copying *ChipOnly* to the disk, and editing the Startup-Sequence once more to read:

```
ChipOnly ; Fixes graphics
George
SYS:run   ; Must give full path or Run in ROM will be used
```

we find that this game now works properly again.

Conclusion

I hope these hints help you to sort out most of your compatibility worries. On my A1200, 85% of software less than three years old works fine after taking these measures. If you do have any difficulties, don't hesitate to contact me at one of the CUGI meetings, making sure that you bring enough information with you to help me diagnose your problem.

Brain Waves

by Colum Keane

The quest for even more powerful computers never ceases. However, as it is realised that traditional computer architectures have limits, designers of these digital systems have cast their eyes on the operation of one of the most advanced machines known to us, the brain.

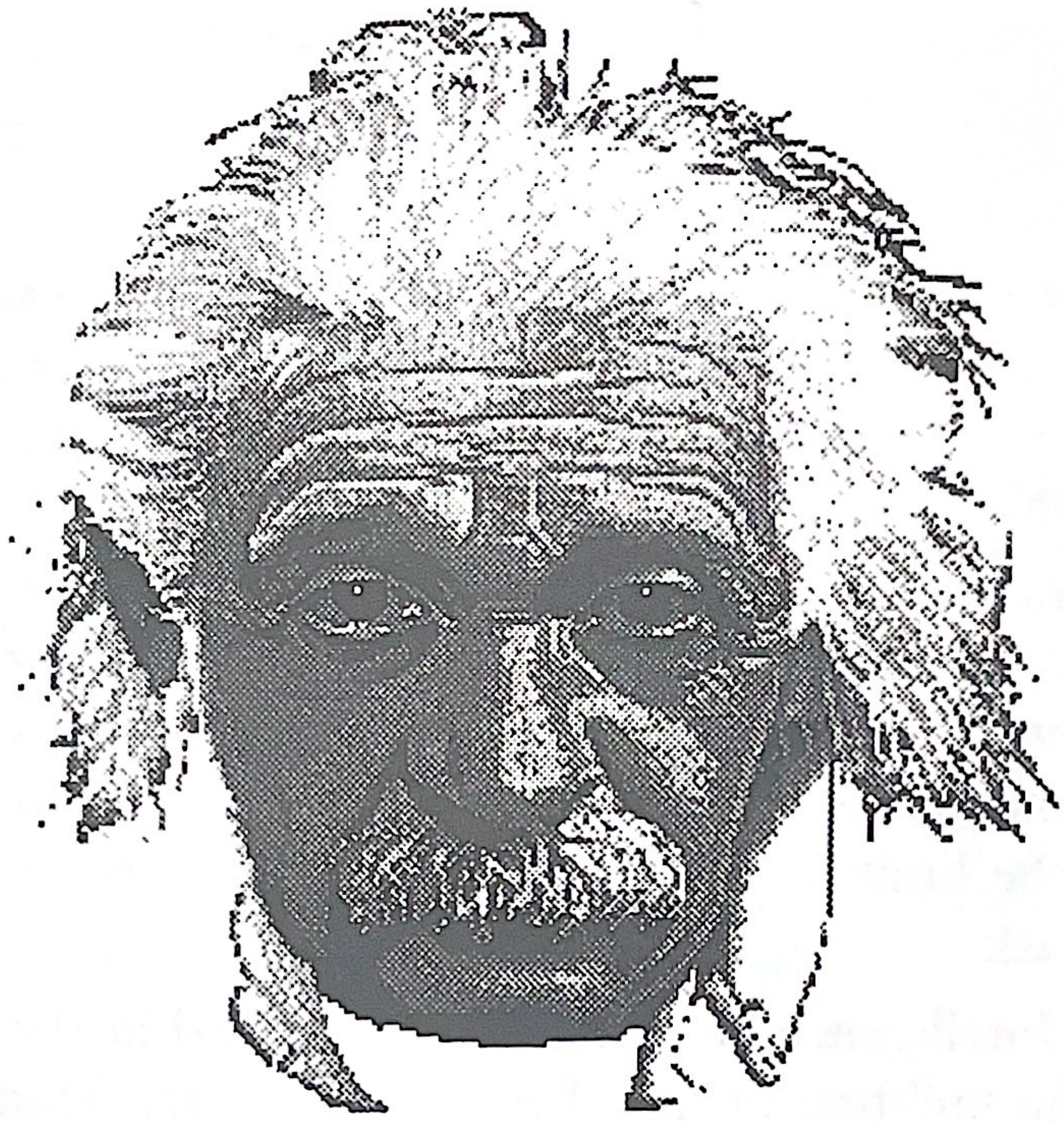
The human brain is made up of two connected sheets of nerve cells about 2 mm thick and 1.5 square metres in size. It contains about 10^{11} nerve cells, each which has between 10^3 and 10^4 connections. This is not a discussion on the physiological makeup of the brain, but it goes to show how complex a structure the brain is. It also shows that to copy it would indeed be a formidable task.

Artificial Intelligence has often been ridiculed in the past for its lack of success in the building of 'intelligent' computers. Traditional AI systems have used programming languages such as LISP or PROLOG to model the way in which the brain sees the world around it and makes computations. The knowledge of a PROLOG system, for instance, is represented as a collection of rules and data in a so-called *knowledge base*. The system acts intelligently by processing these rules, making comparisons and then extracting an answer using algorithms that it has been programmed with.

Neural networks, the great hope for artificial intelligence, have not taken this view of problem solving. Whereas systems that use knowledge bases take a macroscopic view of how the brain operates, neural networks emulate the brain on a microscopic level—they see the brain as a biochemist might.

The study of neural networks has been going on since the earliest days of computers. Research papers on the topic have been put forward as early as 1943. Early systems were primarily visual recognition systems, trained to categorise stimuli presented to the system—vertical bars on a screen, for example. While it was recognised that there were some problems with this approach, the publication of a paper in 1969 by Minsky and Pappert, which called into question the feasibility of neural networks, halted progress for several years afterwards. It wasn't until 1986 that the second golden age of neural networks arrived, with the development of the back propagation algorithm.

A typical neural network is made up of nodes, the equivalent of neurons in the brain. A node will have several inputs, and possibly several outputs. These outputs will feed into the node's neighbours and as the name back-propagation suggests the output of a node will feed back into the net. The



Someday, maybe all computers will think like this

nodes are usually arranged in layers (as they are in the brain), with stimuli entering one side and the network's response emerging out the other.

In a typical neural network system, such as a handwriting recognition system, the nodes must first be taught to recognise patterns. The nodes may have a teach input so that they can first be primed with values to output in reply to certain inputs. Obviously the brain has no explicit learning mode as such; future networks will allow the network to learn from experience, perhaps as a child does. When a node is input values that it has not encountered before, it will then make a best guess by using averaging algorithms. This makes neural networks useful in situations where it would be impractical to prime a network for every possible eventuality.

The problem with neural networks though is that they aren't that easy to implement on a medium to large scale. A software simulation would typically represent the knowledge of a node in a data structure, and use different functions to interrogate and teach the network. As computers by their nature are sequential, and neural networks are parallel in nature, this presents more difficulties.

Simulations also require plenty of computational power. Thousands of differential equations need to be solved for more accurate neural networks to create a model that reflects the way in which the brain works. Advanced neural networks for example may model the flows of electric charge across a neuron's cell membranes. (For Amiga owners, *Amiga Shopper* ran a series on neural networks last summer from June to September. While it might not teach you how to recreate the brain of a nuclear scientist, it does give code in AMOS to build a simple 3×3 node neural network.)

As an example of the computational power that might be required, consider that a bee's brain is reckoned to perform at a massive 10 TFLOPS (10,000,000 MFLOPS), while an Amiga 4000/040 operates at about 3.1 MFLOPS. Perhaps then, the best way to meet this need for computer power is to model the brain even more closely.

Due to the nature of the transistor and the simplicity of binary maths, computers have always worked on the basis of on/off logic. The brain is an analogue device—its signals are voltage variations which are transmitted along ion channels constructed from complex protein molecules. Much of today's research is attempting to replicate these biological systems in silicon. Analogue VLSI is a promising technology. Using existing chip manufacturing methods it may be possible to build chips with thousands of neural nodes on-chip.

Obviously, much work remains to be done before we can expect to see useful neural network systems become widely available. However, with the progress that neuroscientists are making in understanding the brain, it shouldn't be too much longer.

Canon BJ10ex Bubblejet Printer

by Ben Lewis

Having decided that it was about time I bought my own printer instead of using the school's one all the time, I started looking at the various different models that were available. I decided on the Canon BJ10ex Bubblejet because of its high quality output, far superior to a 24-pin dot matrix. The bubblejet printing mechanism is similar to an inkjet, except that the ink is heated first, producing bubbles which force the ink out of the nozzles. This allows for smaller nozzles than an inkjet, so more of them can be put in the print head, giving better output.

The BJ10ex boasts 360×360 dpi output, with 64 ink nozzles. It prints in both LQ and Draft mode at a reasonable rate of 83 cps. It comes with EpsonLQ, IBM ProPrinter and Canon BJ130 emulation, with Roman, Sans Serif and Draft fonts in Epson mode and Courier and Prestige Elite in the other two modes. It can take paper up to 0.2 mm in thickness, which includes envelopes and transparencies. However, it can only use single sheets of paper, with a recommended weight of over 64 g/m^2. It comes with a 20K buffer in LQ mode and 37K in the other emulation modes.

Advantages

The size has to be one of its greatest features (especially for PC laptop users) as it measures only 12.2×8.5×1.9″, a little bigger than an A4 sheet of paper. It only weighs 1.8 kg, and can run off the mains, or using an optional rechargeable battery pack. Its print quality is excellent, although I find that the final printout is a little grey.

The sound level that it operates at it another important advantage, as the only sound that it emits is when the print head is moving across; there are no pins striking the page as with dot matrix printers. It is not particularly complicated to operate, although the variety of typestyle settings across the three modes takes a bit of getting used to.

Disadvantages

The main disadvantage is that it is very expensive to run. Cartridges cost £15–20 each, and print about 700,000 characters, or 400 pages. If you do a lot of graphics printouts, the ink will be used up much more quickly. Refill kits are available; the cheapest I have seen was £11.75 from somewhere in England, which refilled 6 cartridges. However, I believe that the print can be a little blurred with refilled cartridges. Another disadvantage is the lack of a built-in sheet feeder. This is an optional extra, costing about £60, but it's only a minor inconvenience, as it is easy to feed the sheets in by hand.

Overall Impressions

I have found this printer very easy to set up and use; so far I have had no problems. It is fairly cheap to buy as well, provided you are prepared to get it from England. By shopping around, I managed to get a price match with Diamond from Dixons, and paid £186.83 (where they got 83p from I don't know!) and smuggled it home in the car without paying any Irish VAT (well, it was January 1st after all); the equivalent Brother costs £299 here in Power City. You can also buy a colour kit for it, costing about £25–35.

The Canon BJ10ex is a very good cost-effective alternative to a 24-pin dot matrix, with quality comparable to a laser printer. I would strongly recommend anyone looking for a printer to seriously consider this one.

How To Shorten English

Anonymous

Every once in a while, someone comes up with a great idea for reducing paper work. It has been suggested that we all begin to drop one of the unecesary double leters used frequently in our English language, & that we eliminate periods after each sentence since every new sentence starts with a capital leter Som of the vowls can b droped when they are not pronounced This wil result in smaler sntncs & mak for shortr busines comunications & since many wrds end in 'ing' we shal drop the 'in' For exampl, 'adding' becoms 'adg' & 'typing' becoms 'typg'

For this to suced, we shal al aply this god idea for thrten weks, to asur ful aplicatn & to get the fel of it Plez do not use this idea in frst clas letrs without nclosg a not about it We crtnly don't want to anoy our custmrs nor caus il wil Mak a lst as u mak progres & shar it with ur pelow workrs Kep tryg to ad, acumulat & amas frst with comon wrds lik, folowg, efectg, atmptg, fre, tel, wil, ocurg, etc

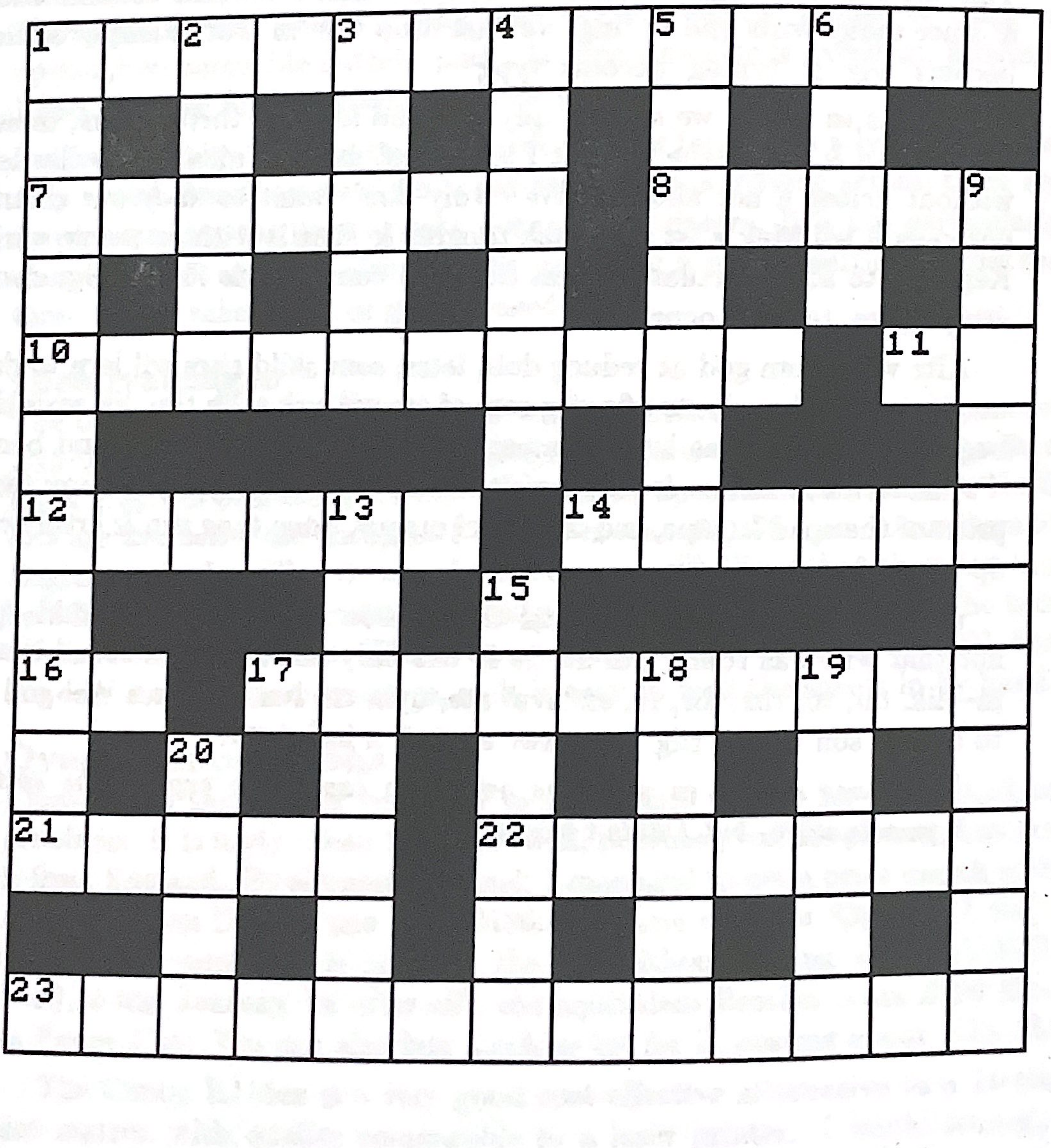
Aftr we becom god at reducg dubl letrs, som skild ritrs wil lern to drop unecesary ltrs frm al intr-ofic ritg som of em wil wrk al th tim, lik wrds that begn with el—such as levat, lement, legnt, lefgant—al 'ph's' shud becom 'f's' lik tlefon, fonetics & fonograf It is stmatd that is systm wil sav twnty prcnt of the spac & papr, usd in comrcl ntrpris, rduc typg tim & crtnly covr up a lot of spelg mstaks

use care at frst, try not to altr th mpreson nor th mesage ntndd—plez not that wrd was rducd frm ate to fv ltrs finly numrl dsgntns shud b wrks in—lik, on, to, thr, for, fv, sx, svn, ate, nyn, tn, lvn, twlv ect Wel god luk to al v u, son u wl b rdg & rtg twc as mch n haf th tm

[*This was slipped in with one article to explain to explain the spelling and punctuation, but I didn't buy it—Ed*]

CUGI Crossword #8

by Aidan Hollinshead



Across

1. Looking with disdain on the criminal coming down (13)
7. Could the senator get mixed up in this crime? (7)
8. Does the trout get stirred up when teaching? (5)
10. A cliched description of using a keyboard with both hands (10)
11. The French where the angels conurbate (2)
12. The list of what the jumbled sorter does (6)
14. He'll make decisions if we trot ideas backwards (6)
16. A circular tart (2)
17. About the bar fifty-one are able to be unloyal (10)
21. Precisely, this used to do something (5)
22. Does the Japanese warrior say 'You are a one' to Samuel (7)
23. One gin can't act assembled is joining together (13)

Down

1. The disaster sounds like winning a feline (11)
2. Is the relative a point in nice surroundings (5)
3. Does N. Susan follow on? (5)
4. See a newt who used to rule England (6)
5. A, I, O or U little Padraig (7)
6. The small Greek letter (4)
9. The back extending to put in a different order (11)
13. Mourning becomes Agamemnon's daughter, according to O'Neill (7)
15. Chase inside out us pure (6)
18. Mother follows the chopped up elm for the preliminary proposition (5)
19. The small dog hidden in the decor gilt (5)
20. Father in suffering (4)

Computer Construction 101

by Leon Hurst

"Class, today we are going to learn how to build a computer!" There was dead silence. Mouths dropped open in amazement. These were the first words uttered by our Computer Architecture lecturer. And so it was that after a month of lectures, we were split into groups of four and given a blue box with a large green manual, a breadboard, a set of chips and lots of wire.

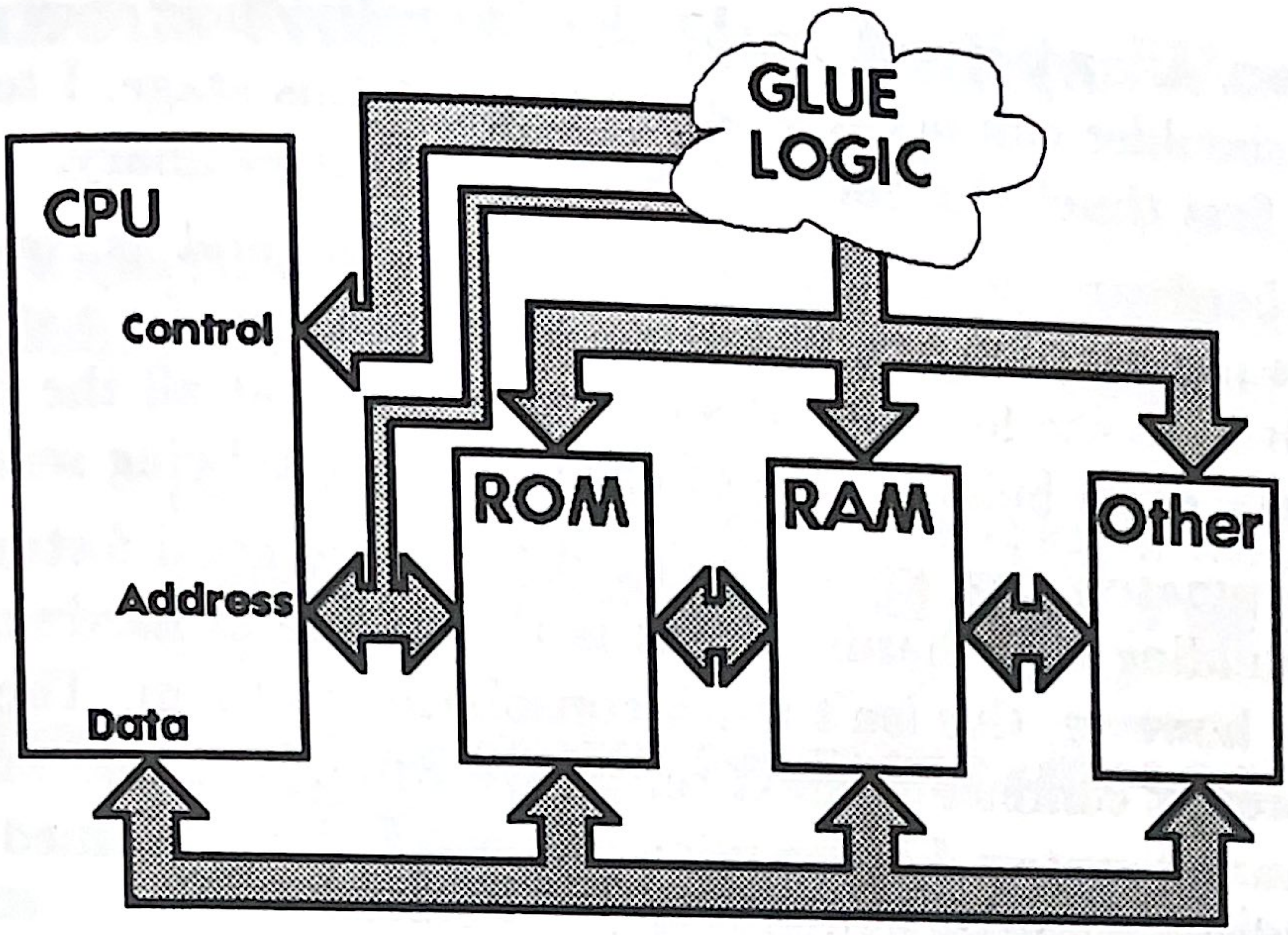
We had spent a month studying the theory of how all these chips were meant to talk to each other, and now it was time to put all this knowledge into practice. To get us on our way, we had a laboratory session in which we would get our clock circuitry working. This was quite simple as all we needed to do was to wire the crystal (16 MHz) into a full adder chip and take out a clock signal that would be half the frequency (8 MHz), as needed for our CPU. This would have worked beautifully if we hadn't used the resistor chip instead of the full adder!

After finding that the full adder was already on the board, we proceeded to wire up a reset button. To reset the MC68008 CPU that we were given, we had to hold a line low (0 volts) for at least 100 milliseconds. This was achieved using a small circuit containing some capacitors and inverters. We would not able to test this until we had a wired-up CPU.

So, the next step was to do some wiring. Well, actually quite a lot of wiring, as there were six major chips (MC68008, 2 RAMs, an EPROM and 2 ACIAs). Since our board only measured 5″ × 4″ the wires quickly took on the form of spaghetti. The wiring should look something like the diagram on the next page, with the arrows containing eight to thirteen wires. Trust me, its a lot of wire! In reality, the final circuit board bore a much greater resemblance to a plate of spaghetti!

Having completed most of the wiring, we then designed a memory map and some interrupt logic. This is the really creative part of building the hardware. The group conspired to lump me with it :-(We were given chips called GALs (Gate Array Logic) which are simply programmable AND and OR gates. Well, we finally decided to split our one megabyte of addressable memory into four 256K blocks. The EPROM would drop into the bottom of the first block, the RAM into the second and the ACIAs (others) into the fourth. The third block was left free for expansion.

All we needed now was to blow the EPROM with a *very* simple program (an infinite loop). Easy? Nope! When blowing an EPROM, you must first erase its contents by exposing it to ultra-violet light. So like good little



Follow this simple diagram and you too can build a computer!

computer scientists we placed it in the UV box and set it for fifteen minutes exposure. Two and a half hours later, we concluded that the UV eraser was 'non-operational'. Actually, the bulb was blown, but we couldn't see this as the light only turns on when the lid is closed. This is a safety precaution to stop people from frying themselves; it certainly had us fooled!

The next day, we got the CPU to talk to the EPROM. The address strobe pin on the CPU oscillated at regular intervals. We have a heart beat! It's alive! We could also test the reset button; it worked as well. Next, the RAM was added, and it too worked without any problem. Today a computer was born. We christened her Stephanie. No, we weren't just being sexist—it did have a female connecter and was therefore female.

At this stage we had a baby, but it couldn't talk yet. We had to add the ACIA (serial) chips. The GALs and EPROM were reprogrammed to accommodate the ACIAs. We hooked her up to a nearby terminal. 'Stephanie ACIA test program v0.1' was what should have sped across the terminal. It didn't! After five minutes of checking wires etc., I noticed a pair of chips on the far bench. It dawned on me—a good reason why it wasn't working could be the fact that we forgot to plug in the ACIAs. I was right. However, this was not quite as stupid as it seems; one mostly works with the underside of the board, where all the wires are, and so can't see the chips. After plugging them in, Stephanie spoke her first words!

Now came the the last major part. This could have proved to be the most frustrating and tedious—it was those dreaded interrupts. Interrupts, for those that don't know, allow the outside world to 'interrupt' the CPU's operation, a kind of tap on the shoulder. By their very nature, this tap on the shoulder can occur at any time. At this stage, I touched wood. It worked first time! Our luck was absolutely extrordinary.

The hardware side of the computer was as good as complete. The last thing we needed to do was to write a demo program for a small presentation to be given to the lecturer. It simply showed that all the chips and exceptions (interrupts being a type of exception) were being serviced properly.

Unfortunately, few groups enjoyed the same good fortune as oureselves whilst building their hardware. It is the nature of hardware to be unpredictable; however, this isn't much consolation to them. The software phase of our project commences next term. We will design and implement a simple operating system for our microprocessor. Programmed in assembly, it will be blown onto our 8k EPROM.

To finish I would say that there few things more satisfying than building your own computer. It's like playing with Lego all over again!

Solution To CUGI Crossword #7

C	R	E	A	T	I	O	N	■	■	D	■	A
A	■	T	■	A	■	■	A	G	R	E	E	D
N	I	H	I	L	I	S	M	■	■	P	■	O
U	■	E	■	C	■	■	E	N	T	R	A	P
T	O	R	Q	U	E	■	D	■	■	E	■	T
E	■	■	■	M	■	E	■	O	A	S	I	S
■	■	A	■	■	O	R	E	■	■	S	■	■
A	R	G	O	N	■	R	■	F	■	■	■	B
M	■	E	■	■	F	■	B	O	L	E	R	O
B	A	N	A	N	A	■	■	R	■	X	■	U
U	■	D	■	■	C	O	V	E	R	I	N	G
S	C	U	L	P	T	■	■	G	■	L	■	H
H	■	M	■	■	S	A	M	O	Y	E	D	S

Solution to Aidan's crossword in the January 1993 Newsletter.

Famous Names in the Amiga World

by Tommy Gibbons

As with every specialised field, the Amiga has its own collection of heroes and nomenclature. Here's a guide to some of the names you're likely to encounter.

Alice	One of the new range of custom chips in the Amiga 1200 and 4000. She takes over from Agnus in the earlier Amigas.
Beck, Kellyn	Famous for creating history type games, e.g. *Defender of the Crown*.
Bluth, Don	With offices here in Dublin, the Sullivan-Bluth company made animated films for the big screen, as well as games like *Dragon's Lair* and *All Dogs Go to Heaven*. Sadly, the company went bust in 1992.
BOB	A rather large type of sprite (Blitter OBject) used in games. BOBs may be any size and almost any colour. They are created by the Amiga's blitter chip and only available CHIP memory dictates the maximum number for display. However, hardware sprites can move much more quickly than BOBs.
Brincken, Bernd von der	Worked with partner Mike Weber to produce a system for controlling an Amiga with thought. Four electrodes were connected to an individual's forehead, and collected and sent brainwaves to a PC. This in turn was connected to an Amiga to produce real time displays.
Commodore	The company who have sold five million machines world wide and still managed to lose £52 million last year.
Denise	Another oldie in the Amiga's ever changing chipset, now replaced by Lisa in the AGA chipset. These chips are responsible for generating the video display.
FAST	Federation Against Software Piracy. Not just store detectives!
Fish, Fred	Creator of the most famous public domain library in the world!
GTS	George Thompson Software. A very good and dependable UK PD supplier.
IDE	Intelligent Drive Electronics. Used instead of SCSI be-

	cause of its lower cost, IDE is available in the A600, A1200 and A4000.
IFF	Interchange File Format. Electronic Arts designed this method of standardising the interchange of graphics and other data between programs created by different companies. IFF can support just about any imaginable type of data, including animation, sound, artwork, text, debug information, and so on.
Harry, Debbie	One of the celebrities who assisted in the launch of the first Amiga in 1985.
Jones, David	Programmer of *Lemmings*, from DMA Design.
JPEG	Joint Photographic Experts Group. A compression technique which is used with graphic files to save valuable disk space. Particularly useful on the new AGA Amigas.
Kickstart	As a starter is to a car, this software is to an Amiga. On the original Amiga 1000, Kickstart was on disk; it later became embedded on a chip. It is responsible for Intuition, AmigaDOS and all the other software components that give your Amiga its distinctive personality.
Lorraine	Code name of the very first of the development Amigas. This code name was used because of industrial espionage in Silicon Valley. This machine eventually became the original Amiga 1000.
Miner, Jay	Credited as the father of the Amiga, he designed the original Amiga chipset.
NLQ	Near Letter Quality. Available on most dot matrix printers to improve print quality for letters.
Public Domain	You can't get software cheaper than this.
RS-232	The name given to the type of serial connection on the back of your Amiga.
Sassenrath, Carl	One of the team who helped Jay Miner become a father (in the computer sense). Now actively involved in CDTV development.
SCART	A connection on the back of most modern TVs. With the proper lead connecting the TV to the RGB signal of an Amiga, your telly can almost be convinced that it is a monitor.
SCSI	Small Computer Systems Interface. You can stick all

	sorts of gizmos into your computer (usually hard drives) and this interface allows you talk to them at very high speeds. SCSI-2 is now available, offering even faster speeds.
Shell	"She sells sea shells by the sea shore..." This tongue twister has nothing to do with the Shell on the Amiga. Rather, the AmigaDOS Shell is one way to communicate with the heart of your Amiga.
SIMM	Single In-line Memory Modules. The chips come on a card for ease of fitting. They are available in sizes ranging from 1 MB×8 giving 1 MB of RAM to 4 MB×9 giving 4 MB of RAM.
Sysop	System Operator. The person responsible for maintaining a large computer or bulletin board service.
Virus	Just as with humans, once your computer catches a virus, it takes a long time to recover (the software, that is).

Plan for the Improvement of English Spelling

by Mark Twain

For example, in Year 1 that useless letter 'c' would be dropped to be replased either by 'k' or 's', and likewise 'x' would no longer be part of the alphabet. The only kase in which 'c' would be retained would be the 'ch' formation, which will be dealt with later. Year 2 might reform 'w' spelling, so that 'which' and 'one' would take the same konsonant, wile Year 3 might well abolish 'y' replasing it with 'i' and Iear 4 might fiks the 'g/j' anomali wonse and for all.

Jenerally, then, the improvement would kontinue iear bai iear with Iear 5 doing awai with useless double konsonants, and Iears 6-12 or so modifaiing vowlz and the rimeining voist and unvoist konsonants. Bai Iear 15 or sou, it wud fainali bi posibl tu meik ius ov thi ridandant letez 'c', 'y' and 'x' – bai now jast a memori in the maindz ov ould doderez – tu riplais 'ch', 'sh', and 'th' rispektivli.

Fainali, xen, aafte sam 20 iers ov orxogrefkl riform, wi wud hev a lojikl, kohirnt speling in ius xrewawt xe Ingliy-spiking werld.

[*CUGI authors please take note, and try and make your submissions a bit more like the first sentence above, and less like the closing sentence!—Ed*]

The First Ten Years

by Geoffrey J. Reeves

It seems like only ten years ago we sat around a classroom in Willow Park quietly talking to those we knew, wondering who the other strange folk were and then he spoke... CUGI was about to boldly go...

It was inevitable that Eddy Evers would be elected chairman—he had, after all, organised this inaugural meeting! A committee was formed and the positions of secretary, treasurer, hardware and software officers, etc were delegated. The membership were of course Commodore enthusiasts—owning a PET (Personal Electronic Transactor) was the thing; unless you had one of those new-fangled VIC-20 or Commodore 64 things. You might even have had one of those SX-64 portables—they were a kind of lap-top which needed a lap spelled T-A-B-L-E.

Some of us still survive (in CUGI)—Eddy Carroll, Steve Kemp and myself can still be spotted. Even Liam Murphy drops in once a while! In fact, so far, at least one founder member has always been on the committee since then. But committees don't make clubs–they only run them; the membership and the world of Commodore has been less predictable and constant.

Back in the old days, programmers programmed in machine code or maybe assembly language. Machine code monitors were in, compilers were a word in a dictionary and disk drives were for the rich or the PET owners. Making a PET talk was one project which became a commercial product—we could dream of becoming millionaires on the basis of things like that.

The Commodore 64, however, made the club back then. While little is said of the VIC-20 these days, it must not be forgotten that the chip which *was* the C-64 was and still is the 'VIC' chip. The fact that it really was the VIC-II is forgotten but colour computers were in those days the *WOW* that 24-bit graphics on a home computer are today. Inevitably, our younger members will sigh at these recollections but it was within the short span of ten years that so much changed.

I recall the magic when 1541s were purchased—they cost hundreds of pounds; some had paid £400–500 for the C-64 itself. Suddenly we had direct fast access to 170K of programs and data on those floppy things. Mind you, they were expensive—I recall paying £33 for a box of 10, and I thought I got a good deal. And none of this double sided nonsense, either—they were even more expensive! [*Of course, the more enterprising of us made our own doublies using one of those little notch cutter tools!—Ed*]

But the PET owners smiled—many of us had these twin floppy drive units; we also had a superior BASIC to the C-64. We could backup disks automatically from one drive to the other! In fact, we could issue the backup command and then disconnect the disk drive from the computer—intelligent disk drives, ah... I remember it well.

But the 64 was here to stay and the membership soon made the club a C-64 club. Programs such as *VDOS* (not bugged, despite the slagging), *PAL*, various BASIC extensions, sprite editors, etc made the machine more accessible. Books such as Raeto West's *Programming the 64* became a bible and a new religion was formed. If you owned a Spectrum (or even Spectra?), an Atari 600 or 800, a Jupiter Ace, Dragon 32, Oric, Acorn Atom, BBC Micro, Apple II or whatever, you were doomed... hell hath no fury like an 8-bit spurned!

The Commodore 500 and 600 series were still-born; another shot in Commodore's foot but what would Commodore do to keep up with the times? Some joker (was it Tramiel's last bequest?) brought out the C-16 and the Plus/4. BASIC 3.5, eh? Then a good machine, improperly marketed—the C-128! I admit to having fallen for this one—it *was* pretty. Pretty fast, pretty colourful, pretty disk drives (fast and double capacity)... a mean machine. I had all the advantages of the now-legendary 64 and lots more.

But, as so often happens, it couldn't survive while the 64 was still selling. Had the 64 been dropped, and the 128's price lowered, a whole new religion would have started. Sure, it took on the flashy Atari 520ST and gave it a run for its money but despite the 1581 (remember that lovely 3½″ drive?) its future was bleak.

Then the rumours started—a computer using a new 16/32-bit processor, that multi-tasked, loads of colours, etc.; we dribbled while Eddy got one (okay, so we *were* envious!). Was it true he paid £70 for his first pack of 10 3½″ disks? Was it really quick? Did it really have 4096 colours? CUGI was about to undergo a revolution—another 64 had been born, or had it? It was expensive and programming it... wouldn't it be too difficult?

We know how that story continued (and continues)—almost all of the membership are Amiga-based and the 64 was replaced by the Amiga 500. These days, we may see the A1200 take over that role. The club has grown in size as the computers grew—the Amiga did great things for clubs. How else could you find out what the manual meant? How else could you find out what Commodore couldn't tell you because some wally had signed away the rights to explain AmigaDOS to another company? How many feet had Commodore left?

I suppose I have to own up about my first Amiga—*Shanghai*. It was a very nice game on the Amiga, a dreadful kludge on the 64—so I bought an Amiga. It had nothing to do with being the chairman without an Amiga on a committee of Amiga owners; it was *Shanghai*.

Two 500s and a souped-up 2000 later, I'm surrounded by A1200 owners and A4000 power users along with the usual A500 and A600 (another foot?) folk. I'm not alone with my 2000 (sounds so much better than a 1500) and someone's bound to have a 3000, too. That's some collection!

While the hardware advanced, the club moved to St. Andrew's College and gained a permanent address, and the club's facilities expanded in all directions. EPROM programming was a fad (did anyone ever get one to work?), disk sales, book library, PD disk library blossomed. Some members cut a hole in their 64 to attach a (music) keyboard—how could someone take a saw to their beloved computer?

Then the repair service or the ask-him-nicely and thank-him-profusely system got under way. Saved quite a few bob, that did, and provided some great entertainment—do you remember Jamie's colour as a (spare) chip was (apparently) wrenched out of his 2000 while installing a 2.04 ROM? That was a good CUGI demo :-)

You are reading one of our other successes (have you written an article or review yet?)—three were produced long before the current batch. Articles (typewritten) with 6502 assembly language listings, reviews, etc I recall one infamous issue which cost £1.80 each to produce—it was the last of those issues! (a serious case of 'bad press'?) We resurrected it as a 4-page A4 newsletter and now it is a 30–40 page magazine. I'm glad I was around when that one got going; and it's nice to see my name in print every once in a while, too.

Registering as an Amiga developer with Commodore has brought many advantages to the club and insights into how it works (is 'works' the right word, I ask myself?). Joking aside, the established members have been assisted in getting various bits and pieces and it has enabled us to produce more software and learn more about this Amiga thing. It has also contributed to the success of the Newsletter—think of all the empty pages if computers has been delivered within two weeks, and not been lost, stolen, broken, etc.

Our own hardware now includes an A500, a CDTV adapter, a scanner and a modem to name but some. Despite the apparent failure of CDTV, products are still forthcoming and our own PD collection (3 gigabytes or so) grows steadily—about 1 or 2 gigabytes per year. I recall the hassle getting

PD disks for the 64, the expense and, at times, the dreadfully poor quality. How many of us really understand just how much good PD material is out there?

The book library seems to have amassed a huge quantity of reading matter—at least our balance sheet suggests so. *ROM Kernal manuals* are there for the borrowing and many other books of varying interests. Having a base at St. Andrew's College has been a major benefit.

The meetings must have changed over the years but, to be honest, I cannot remember the old ones. I guess they just changed to suit the computers, the software and the presenters. We have, after much practice, got to a stage where the enormous preparation can be disguised as an almost off-hand spontaneity. I'm sure there has been the odd meeting where members believed we had nothing prepared or that everything we had planned to do had fallen through at the last moment. Would we be so dishonest with our members?

The social aspect of the club has also improved—table quizzes (Colm's favourite pastime) seem to be successful (there's nothing wrong with my taste in music!) and the tightening of the 10 o'clock ending and loosening of the 8 o'clock start gives more time for chat.

So is that it? No mention of games? Well nearly—what other club can boast a member (get well soon Tommy :-) emulating a computer game character? Or the tact with which we educate our membership ("That's rubbish, XXXXX!")? We all have our favourites.

As for what happens in the next ten years, that's for someone else to record. Whether we have Amiga 4000, 5000 or 10000 machines, use CD-ROMs or optical disks, 16 million colours or 3D virtual reality and so forth is left to your imagination and expectations. I, for one, am going to sit back and enjoy...

The Amiga 1200

by Ben Lewis

Considering that I previously owned a Sinclair QL, I was expecting great things from my new A1200. purchased last November. So far, I have not been disappointed. I am not a complete Amiga beginner, however; I have used the school's Kickstart 1.3 Amigas for a number of years.

The first thing I noticed when I saw it in Clery's was its size, as I had been expecting a pizza-box style Amiga with a separate keyboard. However, this one actually fits on my desk, so I'm not complaining. I purchased it a few weeks later in Peats for £370. (I got the Irish VAT back through my father's business, so it is now a 'business expense'!) The retail price is £450.

I have been very impressed with the A1200's performance to date, though I don't notice the speed increase much as I have not had much experience with the slower processor. One area where I have noticed the increase is in opening windows—almost instantaneous as opposed to the 'wait a few seconds, the kettle's boiling' 68000! Another thing I love is the new mouse; it is very fast, and can accelerate whilst moving across windows. It also fits into the hand very nicely, and the buttons require less effort to press them. Not microswitched yet but anyway...

Another lovely feature is the *Blanker* commodity, which, when the screen is blanked, shows a nice display of ever-changing shapes with cycling colours.

Other than that, I can't really say any more, as I have only used it for word-processing so far. Someday I'll be able to afford *Imagine 2*; then I'll really notice the speed increase! My advice to you is to buy one; it's a brilliant computer that is setting the trend for the '90's.

Amiga to SCART Cable

by Karl Jeacle

I think the last time the CUGI newsletter had an article on how to make up an Amiga to SCART cable was back in September 1990. Unfortunately, there were a few errors in the article which can lead to some confusion for anyone attempting to make up such a cable. I discovered this first hand recently when I wanted to hook up my Amiga directly to the SCART socket on the back of my TV!

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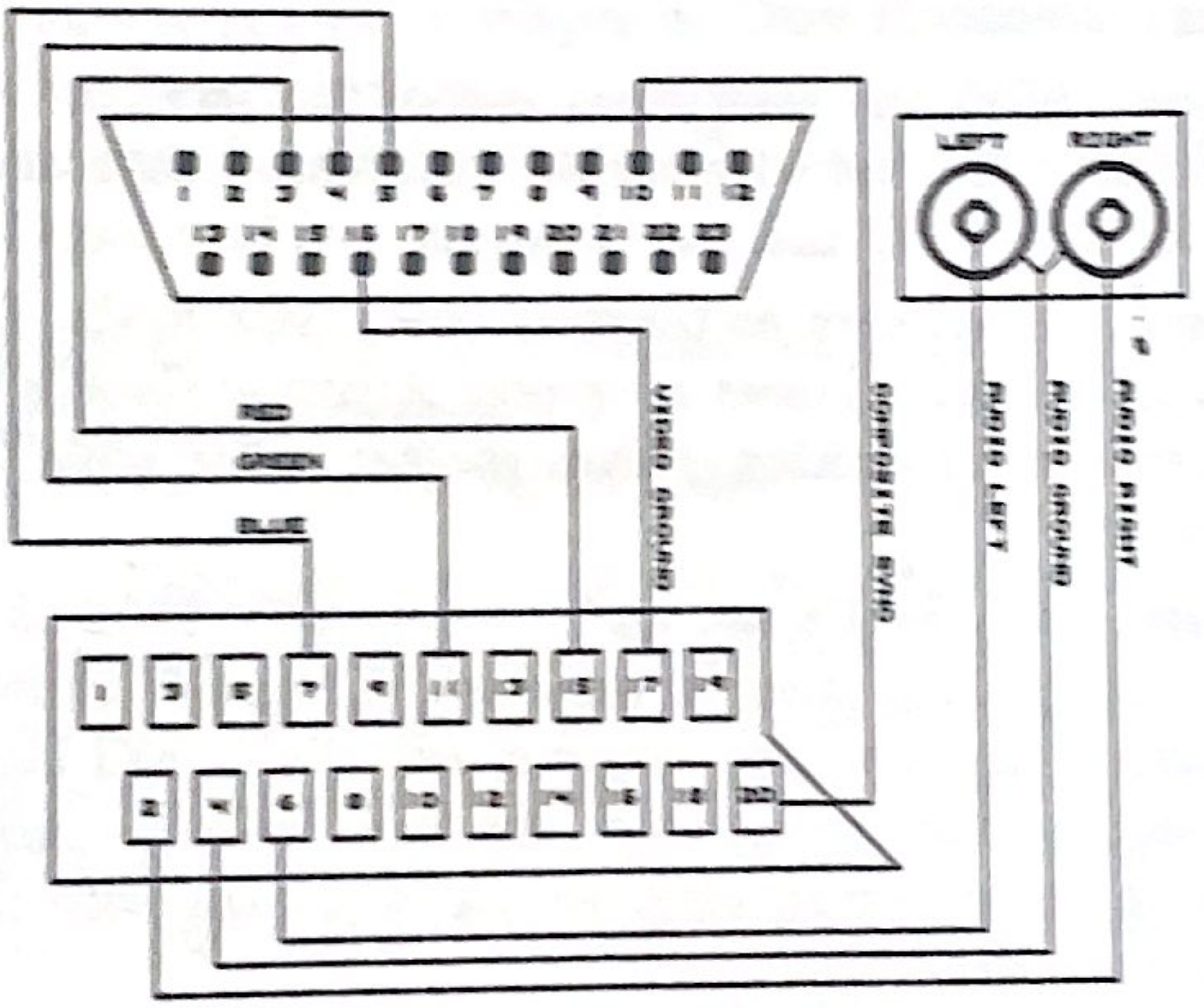
So, having sorted out the correct pin-outs, I've made up a table and diagram of how to make up your own cable. All you need is a DB23 female connector to plug into the Amiga, a SCART plug for the TV/Monitor (this cable will also work with a standard Philips CM-8833 or Commodore 1084), and some 8-core cable to connect the two together.

Note that the DB23 and SCART connectors illustrated in the diagram below are shown from *behind*, i.e. as you see them when you're soldering the wires to the pins.



SCARTSide	*Pin*		*Pin*	*AmigaSide*
Red Signal In	15	⟷	3	Analog Red (75 Ω)
Green Signal In	11	⟷	4	Analog Green (75 Ω)
Blue Signal In	7	⟷	5	Analog Blue (75 Ω)
Comp. Video In (75 Ω)	20	⟷	10	Composite Sync (47 Ω)
Comp. Video Out (Comm)	17	⟷	16	Video Ground
Audio In Left Channel	6	⟷	–	Left Phono
Audio In Right Channel	2	⟷	–	Right Phono
Audio Ground	4	⟷	–	Left + Right Phono Gnd

Charmouth Computer Weekend

by Rocco Matassa

Diary of an Insomniac

23 April, Friday morning, 4:30 am. As the printer churns out the final version of my college assignment, I finish packing. Drinking yet another coffee, I proofread my latest effort—4.40 am is the ideal time to proofread an assignment. I find no glaring errors, so the assignment is sealed into an envelope and addressed. Instead of posting it, I drive around to my tutor's house and deliver it (not directly, you understand, I just slip it through the letter box).

4.55 am. With the assignment out of the way, the weekend is clear. I drive home, tired but with a clear conscience, have another coffee, put Aerosmith's latest CD into the Walkman, and load bags in car.

5.20 am. I head over to Geoff's house; clear roads, fine weather, still dark and all the lights I meet are green. Arrive at Geoff's house at 5.35 am to find Geoff is still packing. I have another coffee while Geoff is repairing is clock radio.

6.00 am. Into Geoff's car, and a quick drive down to Ed's house. Ed is still packing—there must be some law of Murphy about the tighter the travel schedule the later the packing is left. As Ed had been phoned before leaving Geoff's house, we assumed the wait would be minimal. We sat in the car with the motor running; we sat in the car with the motor off; we didn't have a coffee.

6.40 am. Ed appears with his bag, puts it in the boot and we're off to Rosslare to catch the ferry. Delgany to Rosslare in one hour and twenty five minutes. We arrive on time, despite one wrong turn, and check in.

8.20 am. The boat is large and mostly empty. We find seats towards the front on one of the upper decks. I settle into the chair as comfortably as possible, put the headphones on, play some music and doze off.

Charmouth or Bust

Some time ago, Geoff, Ed and myself were at the Commodore UK Developers Conference in Buxton, where we met our counterparts in ICPUG. Following on from this, we received an invitation to attend one of ICPUG SouthEast's computer weekends in Charmouth, which we accepted.

ICPUGSE have for the last several years held very informal weekends in Charmouth at the Queen's Armes hotel, hosted by owners Pete and Jenny Miles. The weekend, entitled *Computers and Gourmet food at the Queen's*

Armes Hotel, held for each of us a certain attraction; speaking for myself, the gourmet part was a strong selling point.

There was, however, one condition attached to the invitation—those attending had to give a short talk, on a subject of their choice. Computer people are an imaginative bunch; all the talks were on computer subjects.

The weekend kicked off on Friday evening with a get together and a meal. The main part of the weekend was to be the talks on Saturday and Sunday. The program for the weekend looked like this:

Saturday

- *Access and More* by Brian Fowler
- *Debugging for the Amiga Developer* by Dave Parkinson
- *Tom's talk* by Tom Cranstoun
- *Designing a Multi-User Adventure in Ten Easy Years* by Ed and Geoff

Sunday

- *CD Presentation* by Gary van Hoek and Ian Winter
- *Networking* by Harry Broomhall
- *Multimedia Presentation* by Jolyon Ralph

We arrived at Fishguard about 1:00 pm, and set off on the long drive to Charmouth, stopping first at a small Welsh café (what the Americans call a greasy spoon) and then again at a Trusthouse Forte service area, mainly to stretch our legs, and waken up (this applied particularly to the driver). One amongst us, who shall remain nameless, bought a copy of Sir Charles Forte's biography, and it wasn't the person with the Italian name!

We arrived at Charmouth at about 6.00 pm, and checked into our hotel. The *Please Mind the Ducks* sign in the driveway said it all—this was quaintness at its best. From my room window I could see ducks, cats and rabbits, and hear a few other creatures.

We stayed at the Newlands hotel, an overflow to cater for the large numbers who might turn up for the weekend; there was also a third hotel, the name of which escapes me, to cater for the overflow from the Newlands hotel if necessary, although it wasn't needed this time. If I say that there were only about twenty-five attending, you might get an idea of the size of these hotels—this was a fairly small get together.

After checking in and freshening up (we had been travelling twelve hours at this stage), we drove over to the Queen's Armes to find the others, and eat. We met John and Janet Bickerstaff, the chairman and organisers of ICPUGSE and the weekend. From Buxton, I remembered Gary and Ian, and other faces to which I was now able to put names. The atmosphere was excellent, far more friendly than Buxton, due to its small size and more informal nature. We had an excellent meal and chatted for a while longer. I left fairly early, around 11:00 pm, as by then a good meal, some alcohol, and lack of sleep were taking their toll, and I could not keep my eyes open any longer.

The next morning after breakfast, Geoff, Ed and myself went for a short walk; out the hotel, first left, and up the beautiful country lane. After climbing to an altitude of several thousand feet [*You obviously take a smaller shoesize than I do!—Ed*] with no sign of the summit, and being aware of the proximity, timewise, of the first talk (it's not that we're not fit or anything like that) we retraced our footsteps to the hotel, and drove over to the Queen's Armes.

The first talk was given by Brian Fowler. For some reason—why, I don't know—Geoff, Ed, Jolyon, Tom and myself went off to Lyme Regis to do some CD hunting, although what we were told was a fairly good CD/music store was in fact a fairly small place, a bit like a Dolphin Disc shop.

The first talk had been about the new Kodak Photo CD format, and Brian had demonstrated how to access this new format using a CD-ROM player and a Photo CD driver. The quality was quite excellent; if all CD-ROMs can make use of this format, then this is another good reason to buy a CD-ROM unit.

The next talk was Dave Parkinson's talk on debugging on the Amiga. The talk was inspired by his latest project: converting the PC version of a game called *Castles II* to the Amiga. This was an informative talk, and went down well, as he entertained the audience with witty anecdotes. To protect those involved, comments about the PC and the PC version of the code he was working on, have been deleted.

(One of my gripes is the predominence of PC software and hardware at the meeting. I remember when I first bought my Amiga, the bulk of software was written on the Atari ST, an inferior machine, and then converted to the Amiga; now the bulk of software is written on the PC, an inferior machine, and converted to the Amiga. Things haven't changed much, have they?)

Tom's talk followed. This was based on a self-assembled PC and a CD-ROM. Tom demonstrated a PC public domanin CD, of the kind that are available on the Amiga. Scrolling demos, music, animations and ray-traced 3D graphics, the type that were been done on the Amiga several years ago. The highlight of his demo was a digitised clip of Bill Gates of Microsoft, speaking at a Windows launch—the computer-induced stutter and jerky graphics had everyone laughing. Laugh as we did, the sad fact is that even though Commodore led the way with CDTV, the PC has a larger CD catalogue already, and is more widely available in shops.

The final talk of the day was given by Geoff and Ed, and was entitled *Designing a Multi-User Adventure in Ten Easy Years*. The talk spanned the history of the project, from its inception to today. Designed originally on the PET, it evolved through several platforms (the C128, and finally the Amiga) and through several languages (BASIC, assembler and finally on to C). It has undergone several re-writes and involved several coders, along with one writer to script the adventure, Madeleine, whose involvement has of late been forcing the pace of development.

The ongoing saga of a program that has been in development for almost ten years proved very entertaining, and their talk generated a lot of good humored witticisms; in fact for the rest of the meeting, any sarcastic comments or witty remarks about one's programs or projects earned the reply, "Well at least it didn't take me ten years!" If Geoff and Ed go back next year, for their own sake, they better have a good deal of progress to show, or even a finished program.

Thus ended Day One; that is, except for dinner and the evening conversations, centred about the bar and the computer room. One thing I noticed was that one of the pre-requisites for a place on an ICPUG committee, is a very thick skin, because the insults fly, just like a CUGI committee or public meeting.

So onto Day Two, with only three talks scheduled for the day. The first was given by Gary Van Hoek and Ian Winter, who have been involved with a CDTV project since Buxton. The demonstration they gave demonstrated the potential of the CDTV. I was pleasantly surprised to see any project that could make the CDTV look impressive, and it did. However, it could just as easily appear on a PC format CD-ROM, a possibility they were considering. As that project is still under development, I can't mention it further, other than to say it was very impressive.

The second talk of the day was given by Harry Broomhall, on networking. Harry started with a talk on budget networking, describing the equipment necessary and handy places to find it (mainly auctions). Harry's talk was again PC based—the one thing apparent at this event was how much PC presence there was for what was expected to be an Amiga weekend. Of the five or six computers in the computer room, four were PCs. Of the commercial developers, all do PC work. I know this is where the money is and cannot therefore criticise them, but for a machine that generated more sales in the UK than the PC by a factor of two, it is disappointing to see the PC get so much attention. Most disappointing was the presence of CD-ROM for the PC, while CDTV was conspicuous by its absence. Amiga programmers are loyal, but they cannot afford to ignore the large market presented by the PC.

Anyway, following Harry was a sweet little extra: a video. This video was created by Tobias Richter entirely on the Amiga—several actually—and is a ten minute science fiction animation, which the club is in the process of getting. Fingers crossed, we shall be able to show you what a really versatile computer can do.

The final demonstration of the day was of the video presentation package *Scala*, given by Jolyon Ralph. Jolyon, whose hobby is rock collecting (who said programmers are boring), made up a slide show of old fossils (much like our committee) and ammonites. Why? Because the beach here at Charmouth is famous for its fossil ammonites.

After the talk, Joylon lead an expedition in search of fossils. Unfairly, after whetting our appetite for fossils by describing the six foot monster fossils found at Folkstone, he informed us that the beach here at Charmouth was famous for little fossils. So, we collected hammers and proceeded to the beach. For a beach littered with fossils, the best I could find were incomplete samples that might have been part of the remains of ammonites; Jolyon, on the other hand, managed to find about ten fine examples. I figure that this was probably the first and last day of mine and Ed's fossil hunting careers.

After the field trip, farewells were said, and we set off on the return trip, well satisfied with the weekend. As I sit here, at God knows what hour of the morning, fulfilling my contractual obligation to produce an article (this article), I wonder how much of the work in progress I have seen will make it to the shop shelves? How much will still be in progress this time next year? And who, if anyone, will drop out of the Amiga market to concentrate on the PC market? Some would call me a cynic (I prefer to call myself a hopeful pessimist) [*Cynic will do nicely—Ed*] but I feel Commodore's days are numbered as anything other than a producer of games machines. I feel it's letting its niche markets slip away.

It would be nice to be able to go to another ICPUGSE weekend in five year's time and see the same faces still developing for the Amiga. I must say it was a great weekend, and I look forward to seeing many of these people again. Thank you Charmouth, and to our hosts Pete and Jenny Miles.

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